circumferentially constricted;

said inflatable cell having a circumference of $N\pi r$ when said cell is deflated and a circumference of 2Nr when said cell is inflated, where N is the number of intra-cell compartments in said cell, and where r is the cross-sectional radius of each compartment when inflated, so as to provide for circumferential constriction.

- 43. The device of claim 42, wherein the fractional decrease in the circumference upon inflation is 0.36.
 - 44. The device of claim 42, wherein the bond comprises a weldment.
 - 45. The device of claim 42, wherein adjacent intra-cell compartments are contiguous.
- 46. The device of claim 42, wherein the perforations are located adjacent the perimetric cell bond.
- 47. The device of claim 42, wherein the perforations are located between compartmental bonds extending from the upper and lower perimetric bonds.
- 48. The device of claim 42, further comprising a fluid inlet to provide for inflation and deflation of the cell.
- 49. The device of claim 42, further comprising inflating means for intermittently inflating said inflatable cell.
 - 50. The device of claim 42, further comprising: inflating means for intermittently inflating said inflatable cell; and control means for determining the temporo-spatial regime of cell inflation.
 - 51. The device of claim 42, further comprising control means for determining the

temporo-spatial regime of cell inflation.

52. A device for applying pressure to a body limb having a primary axis comprising:

an inflatable cell, said inflatable cell including at least two intra-cell compartments; said intra-cell compartments being confluent to allow for confluent air flow between adjacent intra-cell compartments within said cell, adjacent intra-cell compartments being spatially fixed relative to each other, such that upon inflation of said cell, said cell becomes circumferentially constricted;

said inflatable cell having a circumference of $N\pi r$ when said cell is deflated and a circumference of 2Nr when said cell is inflated, where N is the number of intra-cell compartments in said cell and where r is the cross-sectional radius of each compartment when inflated, so as to provide for circumferential constriction.

- 53. The device of claim 52, wherein the fractional decrease in the circumference upon inflation is 0.36.
- 54. The device of claim 52, further comprising a fluid inlet to provide for inflation and deflation of the cell.
- 55. The device of claim 52, further comprising inflating means for intermittently inflating said inflatable cell.
 - 56. The device of claim 52, further comprising: inflating means for intermittently inflating said inflatable cell; and control means for determining the temporo-spatial regime of cell inflation.
- 57. The device of claim 52, further comprising control means for determining the temporo-spatial regime of cell inflation.
 - 58. The device of claim 52, further comprising a portable hand-held pump unit for

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intermittently inflating said inflatable cell via a conduit;

said portable hand-held pump unit including a control unit for determining a sequence of cell inflation and deflation.

- 59. The device of claim 58, wherein said portable hand-held pump unit is battery operated.
- 60. The device of claim 59, wherein said portable hand-held pump unit comprises a rechargeable battery.
- 61. The device of claim 58, wherein said portable hand-held pump unit comprises an air compressor.
- 62. The device of claim 58, wherein said conduit comprises a single tube for delivering fluid to said inflatable cell.
- 63. The device of claim 58, wherein said conduit comprises means for indicating to said control unit an appropriate inflation and deflation sequence.
- 64. The device of claim 58, wherein said inflatable cell comprises at least one self-operated valve.
- 65. An automatic portable ambulant system for applying pressure to a body limb comprising:

an inflatable cell, said inflatable cell including at least two intra-cell compartments; said intra-cell compartments being confluent, each compartment being elongated in a direction of the primary axis; and

said inflatable cell further including inner and outer shells of durable flexible material; said inner and outer shells being bonded together about a perimetric cell bond;

said inner and outer shells being further bonded together along compartmental bonds within said perimetric cell bond to define each intra-cell compartment;

said perimetric cell bond including upper and lower perimetric cell bonds;

said compartmental bonds partly extending between said upper and lower perimetric cell bonds;

said compartmental bonds including perforations to allow for confluent air flow between adjacent intra-cell compartments within said cell, adjacent intra-cell compartments being spatially fixed relative to each other, such that upon inflation of said cell, said cell becomes circumferentially constricted;

said inflatable cell having a circumference of $N\pi r$ when said cell is deflated and a circumference of 2Nr when said cell is inflated, where N is the number of intra-cell compartments in said cell, and where r is the cross-sectional radius of each compartment when inflated, so as to provide for circumferential constriction;

a portable hand-held pump unit for intermittently inflating said inflatable cell via a conduit;

said portable hand-held pump unit including a control unit for determining a sequence of cell inflation and deflation.

- 66. The system of claim 65, wherein said portable hand-held pump unit is battery operated.
- 67. The system of claim 66, wherein said portable hand-held pump unit comprises a rechargeable battery.
- 69. The system of claim 66, wherein said portable hand-held pump unit comprises an air compressor.
- 70. The system of claim 66, wherein said conduit comprises a single tube for delivering fluid to said sleeve.
- 71. The system of claim 66, wherein said conduit comprises means for indicating to said control unit an appropriate inflation and deflation sequence.